



**CHESTERFIELD COUNTY
BOARD OF SUPERVISORS
AGENDA**

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Meeting Date: February 14, 2006

Item Number:

Subject:

Public Hearing to Consider Proposed Amendments to Water Quality Ordinances in the Upper Swift Creek Watershed

County Administrator's Comments:

County Administrator:_____

Board Action Requested:

The Board of Supervisors is requested to adopt the attached amendments to the County Code, which relate to water quality in the Upper Swift Creek Watershed

Executive Summary:

At the December 12, 2006 meeting, the Board held a public hearing to consider the adoption of amendments to the water quality ordinances affecting the Upper Swift Creek Watershed. After hearing from a number of speakers, the Board deferred the public hearing until March 14, 2007. At the January 10, 2007 meeting, the Board accelerated the date for the deferred public hearing, and directed staff to re-advertise a public hearing on the proposed water quality amendments for the Upper Swift Creek Watershed for the evening of February 14, 2007.

In October of 2000, the Board of Supervisors adopted the Watershed Management Master Plan and Maintenance Program for the Swift Creek Reservoir Watershed ("Master Plan"). The Master Plan included the construction of a system of retention ponds located in perennial and intermittent streams, enhanced floodplains, riparian wetlands, riparian corridor management areas and stream restoration projects. All of these facilities are called Best Management Practices (BMPs) which serve to filter pollutants out of stormwater runoff.

The goal of the plan is to ensure that pollutants from existing and new development are reduced in order to minimize the number and severity of algal blooms and other water quality problems in the reservoir.

Preparer: Richard M. McElfish

Title: Director, Environmental Engineering

Attachments:



Yes



No

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The county has been advised by regulatory agencies that the in-line (on flowing streams) regional BMP pond component of the Master Plan may not receive permitting and any future regional facilities should require off-line (not on-flowing streams) construction.

An explanatory summary and the proposed amendments are attached for your consideration. At the October 17, 2006, Chesterfield Planning Commission meeting, the Commission recommended approval of the attached proposed amendments.

Recommendation:

Staff recommends that after holding the scheduled public hearing, the Board approve the recommended ordinance amendments as proposed by the Staff.

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Summary of Proposed Amendments:

Districts: **Midlothian, Clover Hill and Matoaca** - The Watershed consists of all land in the county located upstream of the Swift Creek Reservoir Dam. For land that is included in the Watershed, the proposed amendments would address the following matters:

- **Sec. 8-8. Responsibility for the erosion and sediment control plan.** The proposed amendment requires sediment basins for single-family subdivisions to remain in place and fully stabilized until such time as pollutant ("Pollutants") removal requirements have been satisfied.
- **Sec. 12-71. Sec. 12-72, Sec. 12-73, Sec. 12-74, and Sec. 12-75** The proposed amendments repeal the requirement to use Regional Ponds and related measures ("Regional BMP Program") to control the volume and quality of storm water runoff and pollutants generated by new development in the Watershed, including requirements for landowners to pay the pro-rata share of the cost to construct the Regional Ponds and related measures.
- **Sec. 19-58. Floodplain regulations.** The proposed amendment prohibits certain clearing and development activity within 100-year flood plains when the contributing drainage area exceeds 100 acres in size, but allow approved proper woodlot management practices as an exception to that prohibition.
- **Sec. 19-232. Resource protection area regulations.** The proposed amendment removes various references from the Zoning Ordinance that require consistency with the "Watershed Management Plan for the Swift Creek Reservoir".
- **Sec. 19-233. General performance criteria.** The proposed amendment requires a bond, letter of credit as approved by the county attorney or cash escrow in the amount of \$1,500 per impervious acre for maintenance of BMPs in commercial development.
- **Sec. 19-237. Upper Swift Creek Watershed. and Sec. 19-238. Development regulations.** The proposed amendments require on-site Best Management Practices ("BMPs"), including on-site ponds and/or other measures, to control Pollutants, and allow mitigation measures such as retrofitting BMPs, stream or buffer enhancements, conservation easements, credits, etc. to address Pollutants if on-site BMPs are not sufficient to achieve the required Pollutant control, provided that such measures are approved by the County. The amendments would also require vested property owners to pay a pro-rata share equal to that which would have been paid under the Regional BMP Program. If the owner declines to achieve Pollutant control on-site, pro-rata share funds would be used by the County to achieve Pollutant mitigation measures.
- **Sec. 19-238.5. Boundary adjustments.** The proposed amendment allows boundary adjustments to Resource Protection Areas in the Watershed.
- **Sec. 19-240. Exceptions.** The proposed amendment eliminates the process for granting exceptions to the requirements of the Zoning Ordinance relating to the Watershed.

AN ORDINANCE TO AMEND THE CODE OF THE COUNTY
OF CHESTERFIELD, 1997, AS AMENDED, BY REPEALING
SECTIONS 12-71, 12-72, 12-73, 12-74, 12-75, AND 19-240,
AND AMENDING AND RE-ENACTING SECTIONS 8-8; 19-58, 19-232; 19-233
19-237, 19-238 AND 19-238.5 RELATING TO WATER QUALITY IN THE
UPPER SWIFT CREEK WATERSHED

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) *That Sections 12-71, 12-72, 12-73, 12-74, 12-75, and 19-240 of the Code of the County of Chesterfield, 1997, as amended, are repealed and Sections 8-8, 19-58, 19-232, 19-233, 19-237, 19-238 and 19-238.5 are amended and re-enacted to read as follows:*

Sec. 8-8. Responsibility for the erosion and sediment control plan.

The owner shall be responsible for preparing, submitting and implementing the erosion and sediment control plan. The owner shall also be responsible for the following:

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- (e) All sediment basins constructed in conjunction with single family subdivisions that drain to the Swift Creek Reservoir must remain in place and fully stabilized until such time as compliance with 19-238(d)(1) has been achieved, a joint permit from the US Army Corps of Engineers and the Virginia Department of Environmental Quality has been received which allow construction of the regional BMPs required by article VI of chapter 12 of this Code.

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Sec. 12-71. Purpose and intent of article.

~~The purpose and intent of this article is to require all developers of land to pay their pro-rata share of the cost of providing necessary facilities to control the volume and quality of runoff generated by new development in the Swift Creek Reservoir Watershed. The locations, type and size of such facilities has been established in the Management Master Plan and Maintenance Program for the Swift Creek Reservoir Watershed, adopted by the board of supervisors in October of 2000 (the "plan"). The plan shall constitute the general improvement program required by Code of Virginia, § 15.2-2243. The plan covers a 61 square mile area encompassed by the Swift Creek Reservoir Watershed. This designated area has common stormwater runoff and drainage conditions in that all runoff generated by new development drains to the Swift Creek Reservoir. The plan establishes a program for the strategic location of six types of structural and nonstructural regional best management practice facilities (BMPs) throughout the Swift Creek Reservoir Watershed. The designated BMPs are denoted on a map entitled "Swift Creek Watershed Siting Scenario 5" which is on file in the office of the director of the department of environmental engineering. The purpose of the system of regional BMPs is to control the increased volume, velocity and quality of stormwater runoff that will be caused by anticipated development in the Swift Creek Reservoir Watershed.~~

Sec. 12-72. Basis for the pro-rata share fee.

The pro-rata fee has been calculated based on the increased volume of stormwater runoff, expressed as an increase in impervious area, resulting from projected development in the watershed. The projected costs on which the fee is based include design, land acquisition, construction, wetland mitigation and other factors related to the implementation of the regional BMPs enumerated above and are enumerated in the Watershed Management Plan and Maintenance Program for the Swift Creek Reservoir Watershed which is on file in the office of the director of environmental engineering. The formula developed for calculating the fee by the department of environmental engineering, which is hereby adopted as the formula for determining pro-rata shares, reflects the product of the amount of impervious area and the established fee per impervious acre. The formula shall be updated weekly to reflect changes in construction costs by applying the engineering new record construction cost index value.

Sec. 12-73. Pro-rata share contributions.

Anyone proposing to develop land within the Swift Creek Reservoir Watershed shall be required to pay the pro-rata share of the cost of providing the regional BMPs enumerated above, as provided for in the Watershed Management Plan and Maintenance Program for the Swift Creek Reservoir Watershed. Payment of the pro-rata share fee shall be due prior to the signature of the department of environmental engineering on the record plat for residential development, and prior to the environmental engineering department's approval of the site plan for non-residential development.

Sec. 12-74. Pro-rata share accounts.

The pro-rata payments received shall be kept in a separate account for the implementation of the Watershed Management Plan and Maintenance Program for the Swift Creek Reservoir and expended only for improvements and associated costs made in accordance with the approved plan. Any interest that accrues on such payments shall accrue to the benefit of the county.

Sec. 12-75. Pro-rata fee payments.

Pro-rata fee payments received shall be expended only for necessary engineering, related studies, land acquisition and the construction of those facilities identified in the Watershed Management Plan and Maintenance Program for the Swift Creek Reservoir.

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Sec. 19-58. Floodplain regulations.

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(e) 100-year flood plains designated as riparian corridor management areas in the Upper Swift Creek Watershed.

- (1) The following shall be prohibited within the Upper Swift Creek Watershed 100-year flood plains adjacent to those intermittent streams designated in the

~~Swift Creek Reservoir Watershed Master Plan as riparian corridor management areas, (non-RPA) when the contributing drainage area exceeds 100 acres in size:~~

- a. Clear cutting or thinning of trees;
- b. Removal of tree stumps;
- c. Clearing of vegetation;
- d. Filling;
- e. Grading;
- f. Placement of fences or other appurtenant structures.

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- (2) The following actions are exempt from the prohibitions outlined above:

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e. Approved proper woodlot management practices.

Sec. 19-232. Resource protection area regulations.

In addition to the general performance criteria set forth in section 19-233, the criteria in this section are applicable in resource protection areas.

- (a) Land development may be allowed in a resource protection area, subject to the approval of the department of environmental engineering, only if it (i) is water dependent; (ii) constitutes redevelopment; (iii) is a permitted encroachment established pursuant to subdivision (d) of this section; (iv) is a road or driveway crossing satisfying the conditions set forth in subdivision (a)(4) of this section; or (v) is a flood control or stormwater management facility satisfying the conditions set forth in subdivision (a)(5) of this section.

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- (5) Flood control and stormwater management facilities that drain or treat water from multiple development projects or from a significant portion of a watershed may be allowed in resource protection areas, provided that (i) the department of environmental engineering has conclusively established that the location of the facility within the resource protection area is the optimum location; (ii) the size of the facility is the minimum necessary to provide necessary flood control, stormwater treatment, or both; (iii) the facility must be consistent with ~~the Watershed Management Plan for the Swift Creek Reservoir or any other~~ a stormwater management program that has been approved by the Chesapeake Bay Local Assistance Board as a Phase I modification to the county's Chesapeake Bay Preservation Act program; (iv) all applicable permits for construction in state or federal

waters must be obtained from the appropriate state and federal agencies, such as the U. S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission; (v) approval must be received from the department of environmental engineering prior to construction; and (vi) routine maintenance is allowed to be performed on such facilities to assure that they continue to function as designed. It is not the intent to allow a best management practice that collects and treats runoff from only an individual lot or some portion of the lot to be located within a resource protection area.

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Sec. 19-233. General performance criteria.

Any use, development or redevelopment of land within a Chesapeake Bay Preservation area shall meet the following performance criteria:

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- (f) Stormwater management criteria consistent with the water quality protection provisions (4 VAC 3-20-71 et. seq.) of the Virginia Stormwater Management Regulations (4 VAC 3-20) shall be satisfied.
 - (1) The following stormwater management options shall be considered to comply with the requirements of this subsection:

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- ~~b. Compliance with the Watershed Management Plan for the Swift Creek Reservoir which has been found by the Chesapeake Bay Local Assistance Board to achieve water quality protection equivalent to that required by this subsection;~~
- ~~eb.~~ Compliance with a site-specific VPDES permit issued by the Department of Environmental Quality, provided the department of environmental engineering specifically determines that the permit requires measures that collectively achieve water quality protection equivalent to that required by this subsection.
- (h) Within the Upper Swift Creek Watershed, where the best management practices utilized in a commercial development require regular or periodic maintenance in order to continue their functions, such maintenance shall be ensured by a commercial surety bond, bank letter of credit or cash escrow in an amount equal to \$1,500.00 for each impervious acre or fraction thereof. The form of any bond or letter of credit provided pursuant to this section shall be subject to approval by the county attorney.

- (hi) (1) Land on which agricultural activities are being conducted, including but not limited to crop production, pasture, and dairy and feedlot operations, shall have a soil and water quality conservation assessment conducted that evaluates the effectiveness of existing practices pertaining to soil erosion and sediment control, nutrient management, and management of pesticides and, where necessary, results in a plan that outlines additional practices needed to ensure that water quality protection is being accomplished consistent with the Chesapeake Bay Preservation Act and this division.
- (2) RMA performance criteria shall not apply to land used for agricultural purposes, except for the requirements in subsection (h)(1) above.
- (ij) The director of environmental engineering may authorize the developer to use a retention or detention basin or alternative best management practice facility to achieve the performance criteria set forth in this chapter.
- (jk) The department of environmental engineering shall require evidence of all wetlands permits required by law prior to authorizing grading or other on-site activities.

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Sec. 19-237. Upper Swift Creek Watershed.

The Upper Swift Creek Watershed consists of all land in the county located upstream of the Swift Creek Reservoir Dam.

Sec. 19-238. Development regulations.

Any use, development or redevelopment of land in the Upper Swift Creek Watershed shall meet the following performance criteria:

- (a) No more land shall be disturbed than is necessary to provide for the desired use or development;
- (b) Indigenous vegetation shall be preserved to the maximum extent possible consistent with the use or development allowed;
- (c) Land development shall minimize impervious cover consistent with the use or development allowed;
- (d) (1) Stormwater runoff shall be controlled to achieve the following:

- a. For any new use or development, the post-development, nonpoint-source pollution runoff loads of phosphorous and lead shall not exceed the following:

(i) Phosphorus:

1. The post-development total phosphorus load for residential uses located in areas identified in the Midlothian Area Community Plan for low density residential (1.01 to 2.0 units per acre), in the Route 288 Corridor Plan for Residential (1 to 2.0 dwellings per acre), and in the Upper Swift Creek Plan for single family residential (2.0 units/acre or less), shall not exceed 0.22 pounds per acre per year.
2. The post-development total phosphorus load for all other uses shall not exceed 0.45 pounds per acre per year.

(ii) Lead:

1. The post-development total lead load for nonresidential uses and residential uses at a density greater than 2.0 units per acre located in areas identified for such uses in the comprehensive plan shall not exceed 0.19 pounds per acre per year.
2. The post-development total lead load for all other uses shall not exceed 0.03 pounds per acre per year.

- b. For redevelopment sites not currently served by water quality best management practices, the existing nonpoint-source pollution runoff loads of phosphorus and lead shall be reduced by at least ten percent after redevelopment; however, the loads of such elements need not be reduced below the levels set forth in subsection (d)(1)a.
- c. For redevelopment sites currently served by water quality best management practices, the post-development, nonpoint-source pollution runoff loads of phosphorus and lead shall not exceed the existing loads or the loads set forth in subsection (d)(1)a, whichever are greater.

- (2) Compliance ~~The following stormwater management options shall be considered to comply with the requirements of subsection (d)(1):~~ shall be achieved on site

through incorporation of best management practices that achieve the required control, unless the director of environmental engineering determines that one of the following storm water management options has been satisfied.

- a. ~~Incorporation on the site of best management practices that achieve the required control.~~
- b.a. ~~Compliance with a locally adopted regional stormwater management program incorporating pro rata share payments pursuant to the authority provided in Code of Virginia, § 15.2-2243, that achieves equivalent water quality protection. Mitigation measures approved by the director of environmental engineering in conjunction with the plan approval process. Mitigation measures may include, but are not limited to, the following: (i) construction of BMP's on or off-site, (ii) retrofitting an existing BMP on or off-site, (iii) stream or buffer enhancements or restoration, (iv) purchasing of credits from owners of other property in the watershed when best management practices on the other property exceed the required control, (v) use of perpetual conservation or open space easements, and (vi) if the foregoing mitigation measures are not adequate to achieve the required control, payment to the County of cash sufficient to achieve the required control through other mitigation measures as determined by the director of environmental engineering. Mitigation measures shall be approved by the director of environmental engineering only when: (i) the proposed mitigation measures are located within the Upper Swift Creek watershed, (ii) the proposed mitigation measures are sufficient to achieve the required control, and (iii) the applicant provides an engineer's certification that there is no viable means of sufficiently achieving the required control on site. Unless otherwise determined by the director of environmental engineering, mitigations measures shall be located in the same subwatershed of the Upper Swift Creek watershed.~~
- b. Property that the director of planning has determined to be vested as to the right to comply with the required control through pro rata payments for regional BMPs pursuant to Article VI of chapter 12 repealed [date of adoption], shall achieve compliance through (i) a pro rata payment equal to what would have been required under chapter 12, which shall be used for mitigation measures in the watershed as determined by the director of environmental engineering, (ii) compliance with the other provisions of 19-238(d)(2), or (iii) a combination thereof.
- c. Compliance with a state or locally implemented program of stormwater discharge permits pursuant to section 402(p) of the

federal Clean Water Act, as set forth in 40 CFR 122, 123, 124 and 504, dated December 7, 1988.

- d. For a redevelopment site that is completely impervious as currently developed, restoring a minimum of 20 percent of the site to vegetated open space.

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Sec. 19-238.5. Boundary adjustments.

- (a) Boundary adjustments to resource management areas, as provided for in section 19-231, shall not be permitted in the Upper Swift Creek watershed. The director of environmental engineering shall not grant an exception to this provision, provided, however, that an applicant may seek relief from this provision pursuant to section 19-19.

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~~Sec. 19-240. Exceptions.~~

- (a) ~~A written request for an exception to this division's requirements shall be made to the director of environmental engineering. It shall be accompanied by a water quality impact assessment identifying the impact of the proposed exception on such aspects as water quality and lands within the Upper Swift Creek watershed.~~
- (b) ~~The director of environmental engineering shall review the exception request and the water quality impact assessment. In making a determination, he may impose conditions or require alternatives that are necessary to protect water quality, protect the public safety and welfare and further the purpose and intent of this division. He may grant the exception if he finds all of the following:~~
 - (1) ~~Granting the exception shall not confer any special privileges upon the applicant that are denied by this division to other property owners in the Upper Swift Creek watershed.~~
 - (2) ~~The exception request is not based on conditions or circumstances that are self-created or self-imposed.~~
 - (3) ~~The exception request is the minimum necessary to afford relief.~~
 - (4) ~~The exception request will be consistent with the purpose and intent of this division and not injurious to the neighborhood or otherwise detrimental to the public safety and welfare.~~
 - (5) ~~Reasonable and appropriate conditions are imposed which will prevent the exception request from causing a degradation of water quality.~~
- (c) ~~Any person aggrieved by the director of environmental engineering's decision concerning an exception request may appeal the decision in accordance with section 19-268.~~

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- (2) *That these ordinances shall become effective immediately upon adoption.*